THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604
AUG 15 2013

SUBJECT: Clean Air Act Inspection of Anderson Shumaker Company, Chicago, Illinois

FROM: Roshni Brahmbhatt, Environmental Engineer
Air Enforcement and Compliance Assurance Section (MI/WI)

THRU: Sarah Marshall, Chief SM
Air Enforcement and Compliance Assurance Section (MI/WI)

TO: File

Dates of Inspection July 2, 2013

Attendees Roshni Brahmbhatt, U.S. EPA, *Environmental Engineer*
Katharina Bellairs, U.S. EPA, *Environmental Engineer*
Peter Jaworowski, Anderson Shumaker Company, *Vice President - Manufacturing*

Company Description and Background

Mailing Address: 824 South Central Avenue, Chicago, Illinois 60644

Phone Number: (773) 287-0874

Email Address: peterj@andersonshumaker.com

Primary Contact: Peter Jaworowski, Vice President - Manufacturing

Background: Anderson Shumaker Company is an open die forger that produces products for various customers in the steel industry.

Purpose of Inspection

To determine compliance with rules and regulations promulgated under the Clean Air Act.

Entrance and Opening Conference

We (Roshni Brahmbhatt and Alexandra Letuchy of EPA) arrived at Anderson Shumaker Company ("the facility" or "Anderson Shumaker") located in Chicago, Illinois at

approximately 10:00 a.m. on Tuesday, July 2, 2013. We met with the facility's Vice President of Manufacturing, Peter Jaworowski, and presented our credentials to him.

We explained that we were there to perform an inspection under the Clean Air Act (CAA) and that we would like an overview of the facility's processes, including information about air pollution controls, and a tour of the facility. We also explained that if any of the information provided during our discussions or during the tour were considered Confidential Business Information (CBI), Mr. Jaworoski should let us know so that we can mark it as such and handle it according to federal law and EPA policy. During the inspection, no items were identified as CBI.

Facility Overview

The company began operations at this location since at least the 1930's. Anderson Shumaker currently employs about 48 people and operates in three shifts, with the third shift primarily for maintenance. Typical end-products include bars, discs, blocks, rings, and other customizations. Metals utilized mostly include stainless steel, carbon alloys, and aluminum. The main customers include the oil field industry for well heads, valve industry, and even food processing industry.

Anderson Shumaker operates two natural gas boilers. Anderson Shumaker operates 4 annealing furnaces and 7 forging furnaces. Three of the eleven furnaces were installed in 2011. In 2011, an entire building was constructed and a 2500 ton hydraulic forging press was installed. Mr. Jaworowski mentioned the facility plans to install another furnace in 2013. The capacity of the facility has increased 50%.

In addition, Mr. Jaworowski mentioned the facility does intend to apply for construction permit for the new furnace. Anderson Shumaker currently operates under a Lifetime Operating Permit (ID Number 031600CYM) issued by the Illinois Environmental Protection Agency (IEPA) on March 27, 1996. However, he was not able to locate it.

Anderson Shumaker specializes in open die forging. Open die forging involves the shaping of heated metal parts between a top die attached to a ram and a bottom die attached to a hammer anvil or press bed. Raw materials come as billets (processed from the mill) or ingots (directly from the mill). The ingots are melted and re-solidified to a certain cross section. The facility then has six band saws to cut the metal part to a specific wait.

About 98% of the water then goes through a forge furnace. In the forging furnaces, metal parts are worked above their recrystallization temperatures - ranging from 1200 to 2300 degrees Fahrenheit for a duration ranging from 1 to 72 hours. The metal part is then pounded or squeezed into the desired configuration through the steam hammers to pound the part, the presses, or the ring rollers to squeeze the part. At any time in the process, the metal is never confined or restrained in the dies.

After forging, the metal part may undergo the annealing process to soften the metal. In

the annealing furnaces, the metal parts are heat treated at a temperature range from 900 to 1600 degrees Fahrenheit.

At the end of the forging process, the metal part is placed into either a water or polymer quench tank. The excess solution (either water or polymer) on the metal part is quickly dried off by placing the metal part into the furnace for a couple of seconds prior to shipping and/or storage. The end product is packaged into pallets and shipped by truck. About 8-9 trucks of end-product are shipped per day.

The facility also does machining and milling of the metal parts.

The facility does not have any air pollution control devices.

Facility Tour

Following the opening conference, we requested a tour of the facility. Starting at approximately 10:45 am, Mr. Jaworowski proceeded to walk us through the facility highlighting major process units in the production process.

During the tour of the Facility, we visited the main building and saw three annealing furnaces, five forging furnaces, three hammers, and small water quench tank. We noted visible emissions were seen. We saw the steam hammer, two forging furnaces running, and two annealing furnaces running. We also saw the material storage area and the saw room.

In the new building, we saw a large press, manipulator moving one of the new (2011) forging furnaces and annealing furnaces. There was also one additional forging furnace in the building. The forging furnace was operating at 1900 degrees Fahrenheit. The building has a canopy opening above. We noted visible dust from this process.

We then proceeded to the warehouse area and machining area. The facility has 3 lathes; 2 which are horizontal and 1 which is vertical. The metals machined include nickel from the stainless steel. We noted visible dust from the process. We completed the inspection at around 11:05 a.m.

Closing Conference

Following the tour, we proceeded back to the office. We were provided with a copy of the list of boilers and furnaces and a copy of the 2010 natural gas usage. Mr. Jawarowski mentioned the facility retrofitted the old furnaces to be more efficient. The insulation of the forging furnaces was replaced. The natural gas usage less than doubled at the facility.

We informed Mr. Jaworowski of the process of obtaining a completed inspection report and thanked him for his time. We informed Mr. Jaworowski that a Section 114 Information Request may follow in order to obtain additional information about the facility. We left the facility at around 11:10 a.m.